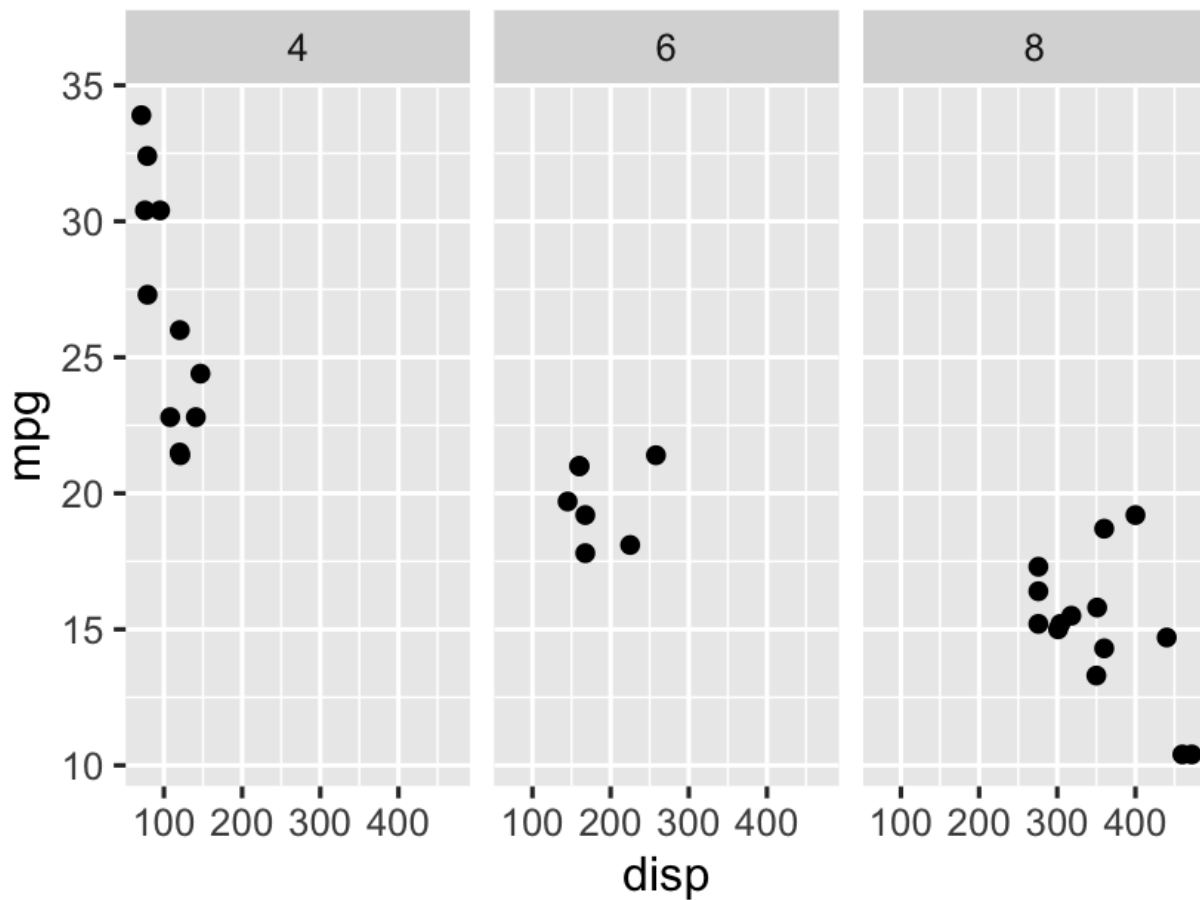


# Facet Grid

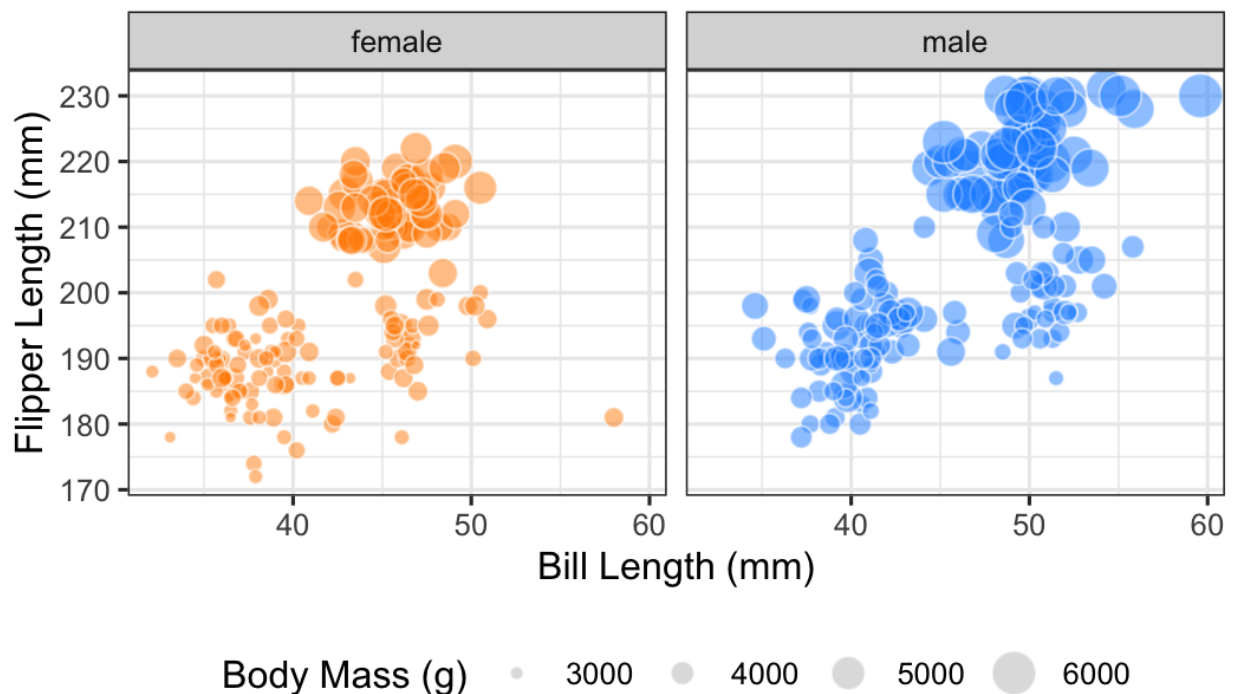
```
ggplot(data = mtcars,  
       mapping = aes(x = disp,  
                     y = mpg)) +  
  geom_point() +  
  facet_grid(cols = vars(cyl))
```



\*Each cylinder is put in a different column

## Multi-faceted Bubble Plot

```
ggplot(penguins_complete, aes(x = bill_length_mm,
                              y = flipper_length_mm,
                              size = body_mass_g,
                              fill = sex
                              )) +
  geom_point(alpha = 0.5, pch = 21, color = "white") +
  facet_wrap(~sex)+
  scale_fill_manual(values = c("darkorange", "dodgerblue"), guide = 'none') +
  scale_radius(name = "Body Mass (g)",
               guide = guide_legend(override.aes = list(fill = 'white',
                                                           size = 1000)),
               labs(x = "Bill Length (mm)",
                    y = "Flipper Length (mm)")) +
  theme(legend.position = "bottom")
```

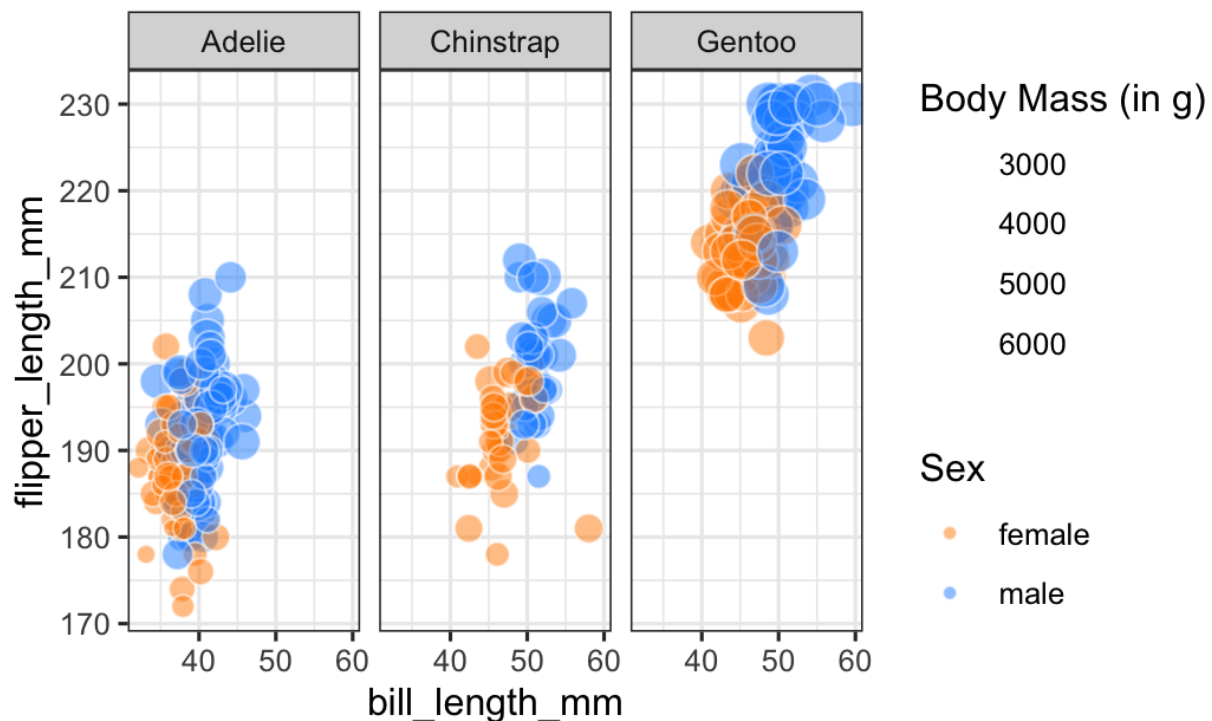


color=white is color of the outline of each point

facet\_wrap(~sex) it divides the data into 2 main categories (female and male)

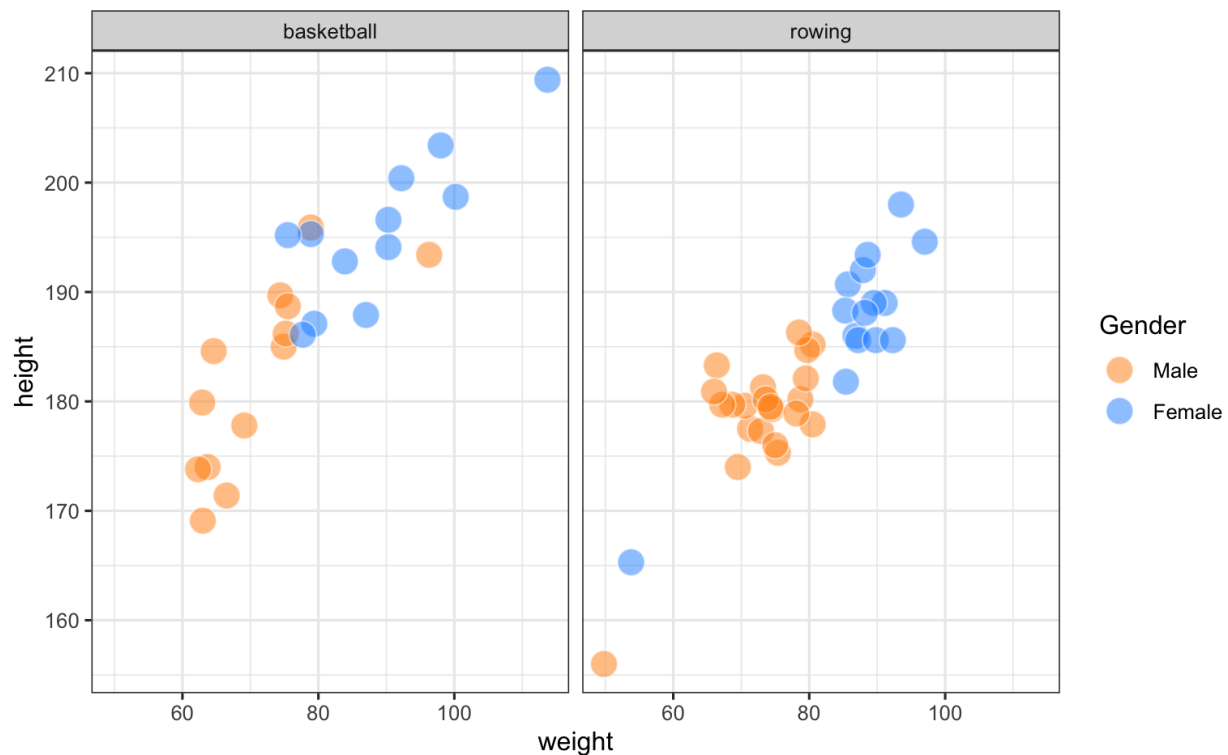
```
ggplot(penguins_complete, aes(x = bill_length_mm,
                              y = flipper_length_mm,
                              size = body_mass_g,
                              fill = sex
                              )) +
  geom_point(alpha = 0.5, pch = 21, color = "white") +
  facet_wrap(~species)+
  scale_fill_manual(values = c("darkorange", "dodgerblue")) + g

scale_radius(name = "Body Mass (g)",
             guide = guide_legend(override.aes = list(fill = '
  labs(x = "Bill Length (mm)",
        y = "Flipper Length (mm)") +
  theme(legend.position = "bottom")
```



## Change the category name within legend

```
ggplot(data = data_basketball_rowing, aes(x = weight,  
      y = height,  
      fill = sex  
    )) +  
  geom_point(alpha = 0.5, size = 5, pch = 21, color = "white") +  
  facet_grid(cols=vars(sport)) +  
  labs(fill = "Gender") +  
  scale_fill_manual(labels = c("Male", "Female"),  
    values = c("darkorange", "dodgerblue"))
```



## Multiple Plots

```
#corruption_2013 <- corruption[which(corruption$year==2013),]  
ggplot(data = corruption,  
       mapping = aes(  
         x = cpi,  
         y = hdi  
       )) + geom_point(alpha=0.4, aes(color=region))  
+ geom_smooth(color="black")+  
labs(x="CPI", y ="HDI", color="Regions") + facet_wrap(~year)
```

